09/502 945

COFC

DOCKET NO.: L0461.70081US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Matthew J. Scanlan et al.

Patent No.:

6,982,316 B1

Serial No.:

09/502,945

Confirmation No.:

5906

Filed:

February 11, 2000

For:

ISOLATED NUCLEIC ACID MOLECULES ASSOCIATED WITH

COLON CANCER AND METHODS FOR DIAGNOSING AND

TREATING COLON CANCER

Examiner:

Misook Yu

Art Unit:

1642

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Mail Stop Certificate of Correction, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 12th day of January, 2006.

Melissa L. Barlow Lyons
Melissa L. Barlow Lyons

Mail Stop Certificate of Correction

Commissioner For Patents P.O. Box 1450 Alexandria, VA 22313-1450

Certificate
JAN 2 0 2006

Sir:

of Correction

Transmitted herewith are the following documents:

- Request for Certificate of Correction Under 37 C.F.R. § 1.322
- Certificate of Correction Form PTO-1050
- Copy of pertinent pages from U.S. Patent No. US 6,982,316 B1
- Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 646-8000, Boston, Massachusetts.

A check is not enclosed. If a fee is required, the Commissioner is hereby authorized to charge Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,

Matthew J. Scanlan et al., Applicant

By:

MaryDilys S. Anderson, Ph.D., Reg. No.: 52,560

Wolf, Greenfield & Sacks, P.C.

600 Atlantic Avenue

Boston, Massachusetts 02210-2206

Telephone: (617) 646-8000

Docket No.: L0461.70081US00

Date: January 12, 2006

xNDDx 976747.1

FEB 2 ZUUS



DOCKET NO.: L0461.70081US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Matthew J. Scanlan et al.

Patent No.:

6,982,316 B1

Serial No.:

09/502,945

Confirmation No.:

5906

Filed:

February 11, 2000

For:

ISOLATED NUCLEIC ACID MOLECULES ASSOCIATED WITH

COLON CANCER AND METHODS FOR DIAGNOSING AND

TREATING COLON CANCER

Examiner:

Misook Yu

Art Unit:

1642

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Mail Stop Certificate of Correction, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 12th day of January, 2006.

Melissa L. Barlow Lyons

Mail Stop Certificate of Correction

Commissioner For Patents P.O. Box 1450 Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. §1.322 and § 1.323

Sir/Madam:

Patentees respectfully request the correction of errors found in the printing of the above-captioned patent. The corrections made to the abstract and to claims 12 rectify typographical errors made by the Patent Office. In the abstract, line 2, "aid" should be replaced with "and". In claim 12, lines 1 and 2, the phrase "at least one" should not be in the claim as it was removed from the claim in the amendment filed on February 16, 2005.

Patent No.: US 6,982,316 B1 Page 2

Patentees point out that the corrections requested do not involve changes in the patent that constitutes new matter or would require reexamination, and therefore, respectfully request that a certificate of correction be issued. Patentee encloses copies of the patent pages with the errors highlighted. A check is not enclosed. If a fee is deemed necessary, the fee may be charged to the account of the undersigned, Deposit Account No. 23/2825. Should any questions arise concerning the foregoing, please contact the undersigned at the telephone number listed below.

Respectfully submitted,

Matthew J. Scanlan et al., Applicant

By:

MaryDitys S. Anderson, Ph.D., Reg. No.: 52,560

Wolf, Greenfield & Sacks, P.C.

600 Atlantic Avenue

Boston, Massachusetts 02210-2206

Telephone: (617) 646-8000

Docket No.: L0461.70081US00

Date: January 12, 2006

xNDDx

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. :

US 6,982,316 B1

DATE :

January 3, 2006

INVENTORS:

Matthew J. Scanlan et al.

It is certified that the error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the abstract:

Line 2 should read as shown below.

--are disclosed. The invention also discloses a diagnostic and--

In the claims:

Claim 12, lines 1 and 2 should read as shown below.

- -- The composition of matter of claim 2, wherein the--
- --nucleic acid molecule consists of the nucleotide--

MAILING ADDRESS OF SENDER:

PATENT NO. US 6,982,316 B1

MaryDilys S. Anderson Wolf, Greenfield & Sacks, P.C. 600 Atlantic Avenue Boston, Massachusetts 02210-2211

FEB 2 2006



US006982316B1

(12) United States Patent

Scanlan et al.

(10) Patent No.: (45) Date of Patent: US 6,982,316 B1 Jan. 3, 2006

(54) ISOLATED NUCLEIC ACID MOLECULES
ASSOCIATED WITH COLON CANCER AND
METHODS FOR DIAGNOSING AND
TREATING COLON CANCER

(75) Inventors: Matthew J. Scanlan, New York, NY (US); Yao-Tseng Chen, New York, NY (US); Elisabeth Stockert, New York, NY (US); Lloyd J. Old, New York, NY (US)

(73) Assignces: Ludwig Institute for Cancer
Research, New York, NY (US); The
New York Hospital-Cornell Medical
Center, New York, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/502,945

(22) Filed: Feb. 11, 2000

Related U.S. Application Data

- (62) Division of application No. 08/948,705, filed on Oct. 10, 1997, now Pat. No. 6,043,084.
- (51) Int. Cl. *C07K 14/47* (2006.01) *C07K 7/00* (2006.01)

424/184.1; 530/350, 300 See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

OTHER PUBLICATIONS

Sahin et al., Proc. Natl. Acad. Sci., vol. 92, pp. 11810-11813, Dec. 1995.*

Alberts, et al. (Molecular Biology of the Cell, 3rd edition, 1994.*

Scalan et al (1998, Int. J. Cancer, vol. 76, pp. 652-658.* Riott et al (Immunology, Fourth Edition, 1996, Mosby, p. 7.9-7.11.*

Peltz et al p. 1729 (1999, J. Exp. Med. vol. 190, pp. 1729-1731).*

de Plaen et al., Proc. Natl. Sci. USA 85:2275, 1988.

Mandelboim et al., Nature 369:69 1994.

van der Bruggen et al., Science 254:1643-1647, 1991.

Brichard et al., J. Exp. Med. 178:489-495, 1993. Coulie et al., J. Exp. Med. 180:35-42, 1994.

Kawakami et al., Proc. Natl. Acad. Sci. USA 91:3515-3519, 1994

Oettgen et al., Immunol. Allerg. Clin. North. Am. 10:607-637, 1990.

Sahin et al., Proc. Natl. Acad. Sci. USA 92:11810-11913, 1995

Crew et al., EMBO J 144:2333-2340, 1995.

Chen et al., Proc. Natl. Acad. Sci. USA 94: 1914-1918 (1997).

* cited by examiner

Primary Examiner—Jeffrey Siew
Assistant Examiner—Misook Yu
(74) Attorney, Agent, or Firm—Wolf, Greenfield & Sacks
P.C.

(57) ABSTRACT

Various molecules associated with disorders such as cancer are disclosed. The invention also discloses diagnostic aid therapeutic methods based upon these molecules, as well as compositions for stimulating an immune response and methods for identifying cancer-associated nucleic acid and polypeptide molecules.

14 Claims, No Drawings

-continued

aaqtttaaqa aqcaatqqqa aqaaqactqq qqctcaaaqq aacaqctact cttqcctaaa accatcactg ctgaggtaca cccagtaccc cttcgcaagc caaagtatga tcagggagtg gaacctgagc tcgagcccgc agatgacctg gatggaggca cggaggagca gggagagcag ccacaggaga tgttgaagag gatggtggtt tatcaagaca gcattcaaga caagatttcc 1440 ggaaatatga ggaaggettt gacccctact ctatgttcac cccagagcag atcatgggga 1500 aggatgtccg gctcctacgc atcaagaagg agggatcctt agacctggcc ctggaaggcg 1560 gtgtggactc ccccattggg aaggtggtcg tttctgctgt gtatgagcgg ggagctgctg 1620 ageggeatgg tggcattgtg aaaggggaeg agateatgge aateaaegge aagattgtga 1680 cagactacac cctqqctqaq qctqacqctq ccctqcagaa qqcctqqaat caqqqcqqqq 1740 actggatcga ccttgtggtt gccgtctgcc ccccaaagga gtatgacgat gagctgacct tcttgctgaa gtccaaaagg ggaaaccaaa ttcacgcgtt aggaaacagt gagctccggc cccacctcgt gaacacaaag cctcggacca gccttgagag aggccacatg acacacacca 1920 gatggcatcc ttgggacctg aatctatcac ccaggaatct caaactccct ttggccctga 1980 accagggcca gataaggaac agctcgggcc actttttga aggccaatgt ggaggaaagg 2040 gagcagccag ccgtttggga gaagatctca aggatccaga ctctcattcc tttcctctgg 2100 cccagtgaat ttggtctctc ccagctttgg gggactcctt ccttgaaccc taataagacc 2160 ccactggagt ctctctctct ccatccctct cctctgccct ctgctctaat tgctgccagg attgtcactc caaaccttac tctgagctca ttaataaaat aaacagattt attttccagc 2289 ttaaaaaaa

35

We claim:

1. An isolated protein encoded by an isolated nucleic acid molecule selected from the group consisting of: SEQ ID NOs: 1, 2, 3, 4 and 5.

- 2. A composition of matter comprising a protein encoded by a nucleic acid molecule selected from the group consisting of SEQ ID NO: 1, 2, 3, 4 and 5.
- The composition of matter of claim 2, further comprising an adjuvant.
- 4. The composition of matter of claim 3, wherein said ⁴⁵ adjuvant is a saponin, GM-CSF, or an interleukin.
- 5. The isolated protein of claim 1, wherein the isolated nucleic acid molecule consists of SEQ ID NO:1.
- 6. The isolated protein of claim 1, wherein the isolated nucleic acid molecule consists of SEQ ID NO:2.
- 7. The isolated protein of claim 1, wherein the isolated nucleic acid molecule consists of SEQ ID NO:3.
- 8. The isolated protein of claim 1, wherein the isolated nucleic acid molecule consists of SEQ ID NO:4.

- 9. The isolated protein of claim 1, wherein the isolated nucleic acid molecule consists of SEQ ID NO:5.
- 10. The composition of matter of claim 2, wherein the nucleic acid molecule consists of the nucleotide sequence set forth in SEQ ID NO: 1.
- 11. The composition of matter of claim 2, wherein the nucleic acid molecule consists of the nucleotide sequence set forth in SEQ ID NO:2.
- 12. The composition of matter of claim 2, wherein the at least one nucleic acid molecule consists of the nucleotide sequence set forth in SEQ ID NO:3.
- 13. The composition of matter of claim 2, wherein the nucleic acid molecule consists of the nucleotide sequence set forth in SEQ ID NO:4.
- 14. The composition of matter of claim 2, wherein the nucleic acid molecule consists of the nucleotide sequence set forth in SEQ ID NO:5.

.